

REMARKS.

Examiner Dang is thanked for his thorough examination of the Subject Patent Application. Regarding the rejection of Claims 1 - 4, 6 - 7, 9, under 35 USC 102(b), as being anticipated by Chau et al (US 5,625,217 B1), in view of Nguyen et al (US 6,084,279) independent Claim 1, has been amended and is now believed to show distinct differences from the prior art. Amended Claim 1, now describes a process in which an amorphous silicon shape is consumed during the formation of metal silicide, which is formed directly on an underlying conductive gate structure. Applicant's invention stresses the use of amorphous silicon to provide the silicon source for eventual metal silicide formation, not polycrystalline silicon. (Applicant did not employ doping of the amorphous silicon layer since doping procedure may result in the transition to an unwanted polycrystalline silicon layer). Applicant clearly states the use of amorphous silicon in the preferred embodiment as well as in amended Claim 1. Applicant believes that undoped, amorphous silicon is superior to doped as well as intrinsic polycrystalline silicon in its ability to be totally consumed during the silicidation procedure. Chau et al as well as Nguyen et al employ doped polysilicon as a source for subsequent metal silicide. The use of non - crystalline amorphous silicon, now included in applicant's amended Claim 1, offers a process different then the above prior art and therefore reconsideration of independent Claim 1, as well as Claims 3 - 4, 6, 7, and 9, now referencing amended independent Claim 1, rejected under 35 USC 102, is requested.

Regarding the rejection of Claims 5 and 10 under 35 USC 103(a) as being unpatentable

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over Chau et al taken with Nguyen as applied to Claims 1 - 4, 6, 7, and 9, and in view of Deshpande et al (US 6,512,266), again these dependent Claims now reference a novel, amended independent Claim 1 which features the use of an undoped, amorphous silicon layer to supply the silicon source for salicidation. Therefore reconsideration of the above Claims rejected under 35 USC 103 is requested.

Regarding the rejection of Claims 1 - 6, 9 -12, and 14, under 35 USC 103(a) as being unpatentable over Bai et al (US 5,818, 092) in view of Deshpande et al, the Bai prior art clearly shows the silicon used for consumption during the salicide or silicide procedure is deposited on a barrier layer 206 which overlays a metal layer. Applicants amended Claim 1 clearly shows the silicon layer formed directly on an underlying or metal layer. Therefore reconsideration of claims 1 - 6, 9 - 12, and 14, rejected under 35 USC 103 is requested based on applicants amended Claim 1, featuring an undoped amorphous silicon layer formed directly on an underlying conductive layer. Reconsideration of the rejection of dependent Claims 8 and 15, under 35 USC 103, now referencing amended independent Claim 1, is also requested. Claim 13 had previously been cancelled.

Regarding the rejection of independent Claim 16, under 35 USC 103(a) as being unpatentable over Bai et al taken with Deshpande et al, and in further view of Wieczorek et al (US 6,274,511), amended Claim 16 now features an undoped amorphous silicon layer formed directly on an underlying first metal layer. In direct contrast Bai et al form a silicon layer directly on an underlying barrier layer. Therefore based on this unique process difference

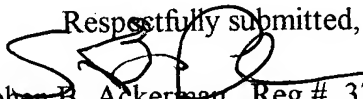
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reconsideration of the rejection of independent Claim 16, as well as referencing dependent Claims 17 - 21, and 24 - 28 , under 35 USC 103(a) is requested. In addition reconsideration of the rejection of dependent Claims 22, 23, and 31, under 35 USC 103(a), now referencing amended independent Claim 16, is requested. Dependent Claims 29 and 30 have previously been cancelled.

Therefore it is believed that independent Claims 1 and 16 offer a unique process sequence featuring an undoped amorphous silicon layer formed directly on an underlying metal layer, wherein the undoped amorphous silicon layer is used as the silicon source for formation of a subsequent metal silicide layer. These unique features differentiate applicant's process invention from any of the above prior art regarding the 35 USC 102, rejection. In addition regarding the 35 USC 103 rejections it is believed that no combination of the above prior art can be used to deliver applicant's method invention.

Allowance of all Claims (1- 12, 14 - 28, 31) is requested.

It is requested that should Examiner Dang not find that the Claims are now Allowable that he call the undersigned attorney at 845-452-5863, to overcome any problems preventing allowance.

Respectfully submitted,

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